WHAT IS CLAIMED IS:

1.   A grid computing system, comprising:

5   a master node configured to manage a grid comprising one or more compute
                nodes;

           a node configured to:

10   discover the master node in accordance with one or more peer-to-peer
                      platform protocols; and

                 send the discovered master node information about the node in accordance
                      with the one or more peer-to-peer platform protocols;

15
                 wherein the master node is further configured to send grid configuration
                      information to the node in accordance with the one or more peer-to-peer
                      platform protocols; and

20   wherein the node is further configured to self-configure as a compute node in the
                      grid in accordance with the grid configuration information.

2.   The grid computing system as recited in claim 1, wherein the node comprises a
bootstrapping mechanism configured to discover the master node and to send the
25   discovered master node information about the node in accordance with the one or more
peer-to-peer platform protocols at startup of the node.

3.   The grid computing system as recited in claim 1, wherein the node was previously
configured as a compute node, and wherein, to self-configure as a compute node in the
30   grid in accordance with the grid configuration information, the node is further configured

to update configuration of the node as a compute node in accordance with the grid configuration information.

4.   The grid computing system as recited in claim 1,

wherein the information about the node includes compute node configuration information for the node;

wherein the master node is further configured to determine from the compute node configuration information that the compute node configuration needs to be updated; and

wherein the grid configuration information sent to the node includes update information for the compute node configuration.

5.   The grid computing system as recited in claim 1, wherein the node is further configured to send the master node notification that the node is leaving the grid in accordance with the one or more peer-to-peer platform protocols.

6.   The grid computing system as recited in claim 1, wherein the master node is further configured to:

submit a job to the node for execution in accordance with the one or more peer-to-peer platform protocols;

detect that the node is no longer participating as a compute node in the grid in accordance with the one or more peer-to-peer platform protocols; and

resubmit the job to another compute node of the grid for execution in accordance with the one or more peer-to-peer platform protocols.

7.   The grid computing system as recited in claim 1, wherein the grid computing system further comprises a job submitter node, and wherein the master node is further configured to:

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   receive a job from the job submitter node in accordance with the one or more peer-to-peer platform protocols;

   distribute the job to the compute node for execution in accordance with the one or

10   more peer-to-peer platform protocols;

   receive results of the execution from the compute node in accordance with the one or more peer-to-peer platform protocols; and

15   send the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

8.   The grid computing system as recited in claim 1, wherein the grid computing system is configured according to Sun Cluster Grid architecture.

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9.   The grid computing system as recited in claim 1, wherein the peer-to-peer platform protocols are JXTA protocols.

25 10. A grid computing system, comprising:

   a plurality of nodes; and

   a master node configured to communicate with the one or more nodes in

30   accordance with one or more peer-to-peer platform protocols to:

configure the nodes to participate as compute nodes in a grid computing
system; and

5   submit jobs to the compute nodes for execution.

11.   The grid computing system as recited in claim 10, further comprising one or more
job submitter nodes, wherein the master node is further configured to:

10   receive the jobs from the job submitter nodes in accordance with the one or more
peer-to-peer platform protocols;

receive results of the execution of the jobs from the compute nodes in accordance
with the one or more peer-to-peer platform protocols; and

15   send the results to the job submitter nodes in accordance with the one or more
peer-to-peer platform protocols.

12.   The grid computing system as recited in claim 10, wherein the grid computing
20   system is configured according to Sun Cluster Grid architecture.

13.   The grid computing system as recited in claim 10, wherein the peer-to-peer
platform protocols are JXTA protocols.

25

14.   A system, comprising:

a processor; and

30   a memory comprising program instructions, wherein the program instructions are

executable by the processor to:

discover a master node in accordance with one or more peer-to-peer platform protocols, wherein the master node is configured to manage a grid comprising one or more compute nodes;

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send the discovered master node information about the node in accordance with the one or more peer-to-peer platform protocols;

10

receive grid configuration information from the master node in accordance with the one or more peer-to-peer platform protocols; and

self-configure as a compute node in the grid in accordance with the grid configuration information.

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15. The system as recited in claim 14, wherein the program instructions are executable by the processor to implement a bootstrapping mechanism configured to discover the master node and to send the discovered master node information about the node in accordance with the one or more peer-to-peer platform protocols at startup of the

20 node.

16. The system as recited in claim 14, wherein the grid is configured according to Sun Cluster Grid architecture.

25 17. The grid computing system as recited in claim 14, wherein the peer-to-peer platform protocols are JXTA protocols.

18. A grid computing system, comprising:

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means for discovering a master node, wherein the master node is configured to manage a grid comprising one or more compute nodes;

means for obtaining grid configuration information from the master node; and

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means for configuring as a compute node in the grid in accordance with the grid configuration information.

10   19.   A method, comprising:

a node discovering a master node in accordance with one or more peer-to-peer platform protocols, wherein the master node is configured to manage a grid comprising one or more compute nodes;

15

the node sending the discovered master node information about the node in accordance with the one or more peer-to-peer platform protocols;

the master node sending grid configuration information to the node in accordance

20   with the one or more peer-to-peer platform protocols; and

the node self-configuring as a compute node in the grid in accordance with the grid configuration information.

25   20.   The method as recited in claim 19, wherein the node was previously configured as a compute node, and wherein said self-configuring as a compute node in the grid comprises updating configuration of the node as a compute node in accordance with the grid configuration information.

30   21.   The method as recited in claim 19, wherein the information about the node

includes compute node configuration information for the node, the method further comprises:

the master node determining that the compute node configuration needs to be updated from the compute node configuration information; and

the master node including update information for the compute node configuration in the grid configuration information sent to the node in response to said determining that the compute node configuration needs to be updated.

22. The method as recited in claim 19, further comprising the node sending the master node notification that the node is leaving the grid in accordance with the one or more peer-to-peer platform protocols.

23. The method as recited in claim 22, further comprising:

the master node submitting a job to the node for execution in accordance with the one or more peer-to-peer platform protocols;

the master node detecting that the node is no longer participating as a compute node in the grid in accordance with the one or more peer-to-peer platform protocols; and

the master node resubmitting the job to another compute node of the grid for execution in accordance with the one or more peer-to-peer platform protocols.

24. The method as recited in claim 19, further comprising:

the master node receiving a job from a job submitter node in accordance with the

one or more peer-to-peer platform protocols;

the master node distributing the job to the compute node for execution in accordance with the one or more peer-to-peer platform protocols;

5

the master node receiving results of the execution from the compute node in accordance with the one or more peer-to-peer platform protocols; and

the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

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25. The method as recited in claim 19, wherein the grid is configured according to Sun Cluster Grid architecture.

15 26. The method as recited in claim 19, wherein the peer-to-peer platform protocols are JXTA protocols.

27. A computer-accessible medium comprising program instructions, wherein the 20 program instructions are configured to implement:

a node discovering a master node in accordance with one or more peer-to-peer platform protocols, wherein the master node is configured to manage a grid comprising one or more compute nodes;

25

the node sending the discovered master node information about the node in accordance with the one or more peer-to-peer platform protocols;

the master node sending grid configuration information to the node in accordance 30 with the one or more peer-to-peer platform protocols; and

the node self-configuring as a compute node in the grid in accordance with the grid configuration information.

5   28.   The computer-accessible medium as recited in claim 27, wherein the node was previously configured as a compute node, and wherein, in said self-configuring as a compute node in the grid, the program instructions are further configured to implement updating configuration of the node as a compute node in accordance with the grid configuration information.

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29.   The computer-accessible medium as recited in claim 27, wherein the information about the node includes compute node configuration information for the node, and wherein the program instructions are further configured to implement:

15   the master node determining that the compute node configuration needs to be updated from the compute node configuration information; and

        the master node including update information for the compute node configuration in the grid configuration information sent to the node in response to said
20   determining that the compute node configuration needs to be updated.

30.   The computer-accessible medium as recited in claim 27, wherein the program instructions are further configured to implement the node sending the master node notification that the node is leaving the grid in accordance with the one or more peer-to-
25   peer platform protocols.

31.   The computer-accessible medium as recited in claim 30, wherein the program instructions are further configured to implement:

30   the master node submitting a job to the node for execution in accordance with the

one or more peer-to-peer platform protocols;

the master node detecting that the node is no longer participating as a compute
node in the grid in accordance with the one or more peer-to-peer platform
protocols; and

the master node resubmitting the job to another compute node of the grid for
execution in accordance with the one or more peer-to-peer platform
protocols.

32.   The computer-accessible medium as recited in claim 27, wherein the program
instructions are further configured to implement:

the master node receiving a job from a job submitter node in accordance with the
one or more peer-to-peer platform protocols;

the master node distributing the job to the compute node for execution in
accordance with the one or more peer-to-peer platform protocols;

the master node receiving results of the execution from the compute node in
accordance with the one or more peer-to-peer platform protocols; and

the master node sending the results to the job submitter node in accordance with
the one or more peer-to-peer platform protocols.

33.   The computer-accessible medium as recited in claim 27, wherein the grid is
configured according to Sun Cluster Grid architecture.

34.   The computer-accessible medium as recited in claim 27, wherein the peer-to-peer
platform protocols are JXTA protocols.

35.   A grid computing system, comprising:

5   a plurality of grids, wherein each grid comprises:

        a master node; and

        one or more compute nodes;

10
        a job submitter node configured to:

        obtain information about the plurality of grids in accordance with the one
            or more peer-to-peer platform protocols;

15
        select one of the plurality of grids to perform a job; and

        submit the job to the selected grid in accordance with the one or more
            peer-to-peer platform protocols.

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36.   The grid computing system as recited in claim 35, wherein, to select one of the
plurality of grids to perform a job, the job submitter node is further configured to
determine from the obtained information that the one of the plurality of grids is best
suited to perform the job in accordance with one or more criteria.

25
37.   The grid computing system as recited in claim 36, wherein the one or more
criteria include speed of job execution.

38.   The grid computing system as recited in claim 36, wherein the one or more
30   criteria include one or more processing requirements for the compute nodes of the

selected grid.

39. The grid computing system as recited in claim 35, wherein the master node of the selected grid is configured to:

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distribute the submitted job to one or more of the compute nodes of the selected grid for execution of the job in accordance with the one or more peer-to-peer platform protocols;

10
receive results of the execution of the job from the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols; and

send the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

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40. The grid computing system as recited in claim 35, wherein the grid computing system is configured according to Sun Cluster Grid architecture.

41. The grid computing system as recited in claim 35, wherein the peer-to-peer

20 platform protocols are JXTA protocols.

42. A grid computing system, comprising:

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means for a job submitter node to obtain information about a plurality of grids;

means for the job submitter node to select one of the plurality of grids to perform a job, wherein each grid comprises a master node and one or more compute nodes; and

30

means for submitting the job to the selected grid.

43.   A method, comprising:

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a job submitter node obtaining information about a plurality of grids in accordance with the one or more peer-to-peer platform protocols;

the job submitter node selecting one of the plurality of grids to perform a job; and

10

the job submitter node submitting the job to the selected grid in accordance with the one or more peer-to-peer platform protocols.

44.   The method as recited in claim 43, wherein said selecting one of the plurality of

15   grids to perform a job comprises determining from the obtained information that the one of the plurality of grids is best suited to perform the job in accordance with one or more criteria.

45.   The method as recited in claim 44, wherein the one or more criteria include speed

20   of job execution.

46.   The method as recited in claim 44, wherein the one or more criteria include one or more processing requirements for compute nodes of the selected grid.

25   47.   The method as recited in claim 43, further comprising:

a master node of the selected grid distributing the submitted job to one or more compute nodes of the selected grid for execution of the job in accordance with the one or more peer-to-peer platform protocols;

30

the master node receiving results of the execution of the job from the one or more

compute nodes in accordance with the one or more peer-to-peer platform

protocols; and

5   the master node sending the results to the job submitter node in accordance with

the one or more peer-to-peer platform protocols.

48.   The method as recited in claim 43, wherein the plurality of grids are configured

according to Sun Cluster Grid architecture.

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49.   The method as recited in claim 43, wherein the peer-to-peer platform protocols are

JXTA protocols.

15   50.   A computer-accessible medium comprising program instructions, wherein the

program instructions are configured to implement:

a job submitter node obtaining information about a plurality of grids in

accordance with the one or more peer-to-peer platform protocols;

20

the job submitter node selecting one of the plurality of grids to perform a job; and

the job submitter node submitting the job to the selected grid in accordance with

the one or more peer-to-peer platform protocols.

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51.   The computer-accessible medium as recited in claim 50, wherein, in said selecting

one of the plurality of grids to perform a job, the program instructions are further

configured to implement determining from the obtained information that the one of the

plurality of grids is best suited to perform the job in accordance with one or more criteria.

30

52.   The computer-accessible medium as recited in claim 50, wherein the program instructions are further configured to implement:

       a master node of the selected grid distributing the submitted job to one or more compute nodes of the selected grid for execution of the job in accordance with the one or more peer-to-peer platform protocols;

       the master node receiving results of the execution of the job from the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols; and

       the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

53.   The computer-accessible medium as recited in claim 50, wherein the plurality of grids are configured according to Sun Cluster Grid architecture.

54.   The computer-accessible medium as recited in claim 50, wherein the peer-to-peer platform protocols are JXTA protocols.

55.   A grid computing system, comprising:

       one or more compute nodes;

       a master node configured to manage the one or more compute nodes; and

       a backup master node configured to:

              detect that the master node is down in accordance with one or more peer-

to-peer platform protocols; and

assume management of the one or more compute nodes after said detection.

56. The grid computing system as recited in claim 55, wherein, to assume management of the one or more compute nodes after said detection, the backup master node is configured to advertise that the backup master node has assumed management of the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols.

57. The grid computing system as recited in claim 55, wherein, to assume management of the one or more compute nodes after said detection, the backup master node is configured to discover the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols.

58. The grid computing system as recited in claim 55, wherein the backup master node is further configured to communicate with the master node in accordance with the one or more peer-to-peer platform protocols to maintain information about the one or more compute nodes prior to said detection.

59. The grid computing system as recited in claim 58, wherein the information about the one or more compute nodes includes state information about one or more jobs executing on the compute nodes.

60. The grid computing system as recited in claim 55, wherein, to assume management of the one or more compute nodes after said detection, the backup master node is configured to notify the one or more compute nodes that the backup master node has assumed management of the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols.

61.   The grid computing system as recited in claim 60, wherein the one or more compute nodes are configured to update grid configuration information to indicate that the backup master node has assumed management of the one or more compute nodes in

5   response to said notification.

62.   The grid computing system as recited in claim 55, wherein, to detect that the master node is down in accordance with one or more peer-to-peer platform protocols, the backup master node is further configured to:

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poll the master node in accordance with the one or more peer-to-peer platform protocols; and

detect that the master node is down if the master node does not respond to the poll.

15

63.   The grid computing system as recited in claim 55, wherein the grid computing system further comprises a job submitter node, and wherein the master node is further configured to:

20   receive a job from the job submitter node in accordance with the one or more peer-to-peer platform protocols;

distribute the job to the compute nodes for execution in accordance with the one or more peer-to-peer platform protocols;

25

receive results of the execution from the compute nodes in accordance with the one or more peer-to-peer platform protocols; and

send the results to the job submitter node in accordance with the one or more
30   peer-to-peer platform protocols.

64.   The grid computing system as recited in claim 55, wherein the grid computing system is configured according to Sun Cluster Grid architecture.

65.   The grid computing system as recited in claim 55, wherein the peer-to-peer platform protocols are JXTA protocols.

66.   A grid computing system, comprising:

        means for detecting that a master node of a grid is no longer available using one or more peer-to-peer platform protocols; and

        means for another node to assume management of one or more compute nodes of the grid after said detection.

67.   A method, comprising:

        a master node managing operations of one or more compute nodes of a grid;

        the master node going down;

        a backup master node detecting that the master node is down in accordance with one or more peer-to-peer platform protocols; and

        the backup master node assuming management of the one or more compute nodes after said detecting that the master node is down.

68.   The method as recited in claim 67, wherein said assuming management of the one

or more compute nodes comprises advertising that the backup master node has assumed management of the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols.

69. The method as recited in claim 67, wherein said assuming management of the one or more compute nodes comprises the backup master node discovering the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols.

70. The method as recited in claim 67, further comprising the backup master node communicating with the master node in accordance with the one or more peer-to-peer platform protocols to maintain information about the one or more compute nodes prior to said detecting that the master node is down.

71. The method as recited in claim 70, wherein the information about the one or more compute nodes includes state information about one or more jobs executing on the compute nodes.

72. The method as recited in claim 67, wherein said assuming management of the one or more compute nodes comprises the backup master node notifying the one or more compute nodes that the backup master node has assumed management of the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols.

73. The method as recited in claim 72, further comprising the one or more compute nodes updating grid configuration information to indicate that the backup master node has assumed management of the one or more compute nodes in response to said notifying.

74. The method as recited in claim 67, wherein said detecting that the master node is down comprises:

polling the master node in accordance with the one or more peer-to-peer platform

protocols; and

detecting that the master node is down if the master node does not respond to the poll.

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75. The method as recited in claim 67, further comprising:

the master node receiving a job from a job submitter node in accordance with the one or more peer-to-peer platform protocols;

10

the master node distributing the job to the compute nodes for execution in accordance with the one or more peer-to-peer platform protocols;

the master node receiving results of the execution from the compute nodes in accordance with the one or more peer-to-peer platform protocols; and

15

the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

20 76. The method as recited in claim 67, wherein the grid is configured according to Sun Cluster Grid architecture.

77. The grid computing system as recited in claim 67, wherein the peer-to-peer platform protocols are JXTA protocols.

25

78. A computer-accessible medium comprising program instructions, wherein the program instructions are configured to implement:

30 a master node managing operations of one or more compute nodes of a grid;

the master node going down;

a backup master node detecting that the master node is down in accordance with

5   one or more peer-to-peer platform protocols; and

the backup master node assuming management of the one or more compute nodes
after said detecting that the master node is down.

10   79.   The computer-accessible medium as recited in claim 78, wherein, in said
assuming management of the one or more compute nodes, the program instructions are
further configured to implement advertising that the backup master node has assumed
management of the one or more compute nodes in accordance with the one or more peer-
to-peer platform protocols.

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80.   The computer-accessible medium as recited in claim 78, wherein, in said
assuming management of the one or more compute nodes, the program instructions are
further configured to implement the backup master node discovering the one or more
compute nodes in accordance with the one or more peer-to-peer platform protocols.

20

81.   The computer-accessible medium as recited in claim 78, wherein the program
instructions are further configured to implement the backup master node communicating
with the master node in accordance with the one or more peer-to-peer platform protocols
to maintain information about the one or more compute nodes prior to said detecting that

25   the master node is down.

82.   The computer-accessible medium as recited in claim 81, wherein the information
about the one or more compute nodes includes state information about one or more jobs
executing on the compute nodes.

30

83.   The computer-accessible medium as recited in claim 78, wherein, in said assuming management of the one or more compute nodes, the program instructions are further configured to implement the backup master node notifying the one or more compute nodes that the backup master node has assumed management of the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols.

84.   The computer-accessible medium as recited in claim 83, wherein the program instructions are further configured to implement the one or more compute nodes updating grid configuration information to indicate that the backup master node has assumed management of the one or more compute nodes in response to said notifying.

85.   The computer-accessible medium as recited in claim 78, wherein, in said detecting that the master node is down, the program instructions are further configured to implement:

        polling the master node in accordance with the one or more peer-to-peer platform protocols; and

        detecting that the master node is down if the master node does not respond to the poll.

86.   The computer-accessible medium as recited in claim 78, wherein the program instructions are further configured to implement:

        the master node receiving a job from a job submitter node in accordance with the one or more peer-to-peer platform protocols;

        the master node distributing the job to the compute nodes for execution in accordance with the one or more peer-to-peer platform protocols;

the master node receiving results of the execution from the compute nodes in accordance with the one or more peer-to-peer platform protocols; and

the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

87.   The computer-accessible medium as recited in claim 78, wherein the grid is configured according to Sun Cluster Grid architecture.

88.   The computer-accessible medium as recited in claim 78, wherein the peer-to-peer platform protocols are JXTA protocols.

89.   A grid computing system, comprising:

a plurality of grids, wherein each grid comprises:

a master node; and

one or more compute nodes;

one of the master nodes configured to:

discover another one of the grids that can execute a job submitted to the one of the master nodes in accordance with one or more peer-to-peer platform protocols; and

send the job to the master node of the other grid for execution in accordance with the one or more peer-to-peer platform protocols.

90.   The grid computing system as recited in claim 89, wherein the grid computing system further comprises a job submitter node configured to submit the job to the one of the master nodes, and wherein the other master node is configured to:

5   distribute the job to the compute nodes of the other grid for execution in accordance with the one or more peer-to-peer platform protocols;

            receive results of the execution from the compute nodes of the other grid in accordance with the one or more peer-to-peer platform protocols; and

10   send the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

91.   The grid computing system as recited in claim 89, wherein the grid computing
15 system is configured according to Sun Cluster Grid architecture.

92.   The grid computing system as recited in claim 89, wherein the peer-to-peer platform protocols are JXTA protocols.

20

93.   A grid computing system, comprising:

        means for a master node of a grid to discover another grid that can execute a job submitted to the master node for execution; and

25

        means for the master node to send the job to a master node of the other grid for execution.

30 94.   A method, comprising:

a job submitter node submitting a job to a master node of a grid for execution;

the master node discovering another grid that can execute the job submitted to the
master node in accordance with one or more peer-to-peer platform
protocols; and

the master node sending the job to a master node of the other grid for execution in
accordance with the one or more peer-to-peer platform protocols.

95. The method as recited in claim 94, further comprising:

the master node of the other grid distributing the job to the compute nodes of the
other grid for execution in accordance with the one or more peer-to-peer
platform protocols;

the master node of the other grid receiving results of the execution from the
compute nodes of the other grid in accordance with the one or more peer-
to-peer platform protocols; and

the master node of the other grid sending the results to the job submitter node in
accordance with the one or more peer-to-peer platform protocols.

96. The method as recited in claim 94, wherein the grids are configured according to
Sun Cluster Grid architecture.

97. The method as recited in claim 94, wherein the peer-to-peer platform protocols are
JXTA protocols.

98.   A computer-accessible medium comprising program instructions, wherein the program instructions are configured to implement:

a job submitter node submitting a job to a master node of a grid for execution;

the master node discovering another grid that can execute the job submitted to the master node in accordance with one or more peer-to-peer platform protocols; and

the master node sending the job to a master node of the other grid for execution in accordance with the one or more peer-to-peer platform protocols.

99.   The computer-accessible medium as recited in claim 98, wherein the program instructions are further configured to implement:

the master node of the other grid distributing the job to the compute nodes of the other grid for execution in accordance with the one or more peer-to-peer platform protocols;

the master node of the other grid receiving results of the execution from the compute nodes of the other grid in accordance with the one or more peer-to-peer platform protocols; and

the master node of the other grid sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

100.   The computer-accessible medium as recited in claim 98, wherein the grids are configured according to Sun Cluster Grid architecture.

101.   The computer-accessible medium as recited in claim 98, wherein the peer-to-peer

platform protocols are JXTA protocols.

102.   A decentralized grid computing system, comprising:

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        a plurality of compute nodes; and

        a job submitter node, configured to:

10   select one of the plurality of compute nodes to perform a job in accordance with one or more peer-to-peer platform protocols; and

               directly submit the job to the selected compute node for execution in accordance with the one or more peer-to-peer platform protocols.

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103.   The decentralized grid computing system as recited in claim 102, wherein the selected compute node is configured to:

        execute the submitted job; and

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        directly return results of said execution to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

104.   The decentralized grid computing system as recited in claim 102, wherein the
25   decentralized grid computing system is configured according to Sun Cluster Grid architecture.

105.   The decentralized grid computing system as recited in claim 102, wherein the peer-to-peer platform protocols are JXTA protocols.

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106. A decentralized grid computing system, comprising:

5   means for a job submitter node to select one of a plurality of compute nodes to
         perform a job;

     means for the job submitter node to directly submit the job to the selected
         compute node for execution; and

10   means for the selected compute node to directly return results of the job to the job
         submitter node.

107. A method, comprising:

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     a job submitter node selecting one of a plurality of compute nodes to perform a
         job in accordance with one or more peer-to-peer platform protocols; and

     the job submitter node directly submitting the job to the selected compute node
20   for execution in accordance with the one or more peer-to-peer platform
         protocols.

108. The method as recited in claim 107, further comprising:

25   the selected compute node executing the submitted job; and

     the selected compute node directly returning results of said execution to the job
         submitter node in accordance with the one or more peer-to-peer platform
         protocols.

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109. The method as recited in claim 107, wherein the job submitter node and the plurality of compute nodes are configured according to Sun Cluster Grid architecture.

110. The method as recited in claim 107, wherein the peer-to-peer platform protocols are JXTA protocols.

111. A computer-accessible medium comprising program instructions, wherein the program instructions are configured to implement:

a job submitter node selecting one of a plurality of compute nodes to perform a job in accordance with one or more peer-to-peer platform protocols; and

the job submitter node directly submitting the job to the selected compute node for execution in accordance with the one or more peer-to-peer platform protocols.

112. The computer-accessible medium as recited in claim 111, wherein the program instructions are further configured to implement:

the selected compute node executing the submitted job; and

the selected compute node directly returning results of said execution to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

113. The computer-accessible medium as recited in claim 111, wherein the job submitter node and the plurality of compute nodes are configured according to Sun Cluster Grid architecture.

114.   The computer-accessible medium as recited in claim 111, wherein the peer-to-peer platform protocols are JXTA protocols.

5   115.   A grid computing system, comprising:

one or more grids, wherein each grid comprises:

one or more compute nodes;

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a master node configured to obtain status information from the one or more compute nodes in accordance with one or more peer-to-peer platform protocols; and

15   a monitor node configured to obtain grid information including the status information from the master nodes of the one or more grids in accordance with the one or more peer-to-peer platform protocols.

116.   The grid computing system as recited in claim 115, wherein the grid information
20   obtained by the monitor node is configured for use in monitoring and administering the one or more grids.

117.   The grid computing system as recited in claim 115, wherein the grid computing system further comprises one or more job submitter nodes, and wherein each master node
25   is further configured to:

receive a job from one of the job submitter nodes in accordance with the one or more peer-to-peer platform protocols;

30   distribute the job to the one or more compute nodes of the grid for execution in

accordance with the one or more peer-to-peer platform protocols;

receive results of the execution from the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols; and

send the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

118.   The grid computing system as recited in claim 115, wherein the grid computing system is configured according to Sun Cluster Grid architecture.

119.   The grid computing system as recited in claim 115, wherein the peer-to-peer platform protocols are JXTA protocols.

120.   A grid computing system, comprising:

means for a master node of each of a plurality of grids to obtain status information from one or more compute nodes of the master node's grid; and

means for a monitor node to obtain grid information including the status information from the master nodes of the plurality of grids.

121.   A method, comprising:

for each of a plurality of grids, a master node of the grid obtaining status information from one or more compute nodes of the grid in accordance with one or more peer-to-peer platform protocols; and

a monitor node obtaining grid information including the status information from the master nodes of the plurality of grids in accordance with the one or more peer-to-peer platform protocols.

5   122.   The method as recited in claim 121, wherein the grid information obtained by the monitor node is configured for use in monitoring and administering the one or more grids.

123.   The method as recited in claim 121, further comprising:

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a master node of one of the grids receiving a job from a job submitter node in accordance with the one or more peer-to-peer platform protocols;

the master node distributing the job to the one or more compute nodes of the grid
15   for execution in accordance with the one or more peer-to-peer platform protocols;

the master node receiving results of the execution from the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols;
20   and

the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

25   124.   The method as recited in claim 121, wherein the plurality of grids are configured according to Sun Cluster Grid architecture.

125.   The method as recited in claim 121, wherein the peer-to-peer platform protocols are JXTA protocols.

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126.   A computer-accessible medium comprising program instructions, wherein the
program instructions are configured to implement:

5   for each of a plurality of grids, a master node of the grid obtaining status
            information from one or more compute nodes of the grid in accordance
            with one or more peer-to-peer platform protocols; and

         a monitor node obtaining grid information including the status information from
10   the master nodes of the plurality of grids in accordance with the one or
            more peer-to-peer platform protocols.

127.   The computer-accessible medium as recited in claim 126, wherein the grid
information obtained by the monitor node is configured for use in monitoring and
15   administering the one or more grids.

128.   The computer-accessible medium as recited in claim 126, wherein the plurality of
grids are configured according to Sun Cluster Grid architecture.

20   129.   The computer-accessible medium as recited in claim 126, wherein the peer-to-
peer platform protocols are JXTA protocols.

130.   A grid administration system, comprising:

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         a processor; and

         a memory comprising program instructions, wherein the program instructions are
            executable by the processor to:

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obtain grid information from one or more grids in accordance with one or more peer-to-peer platform protocols; and

remotely manage operations of the one or more grids via the one or more

5   peer-to-peer platform protocols using the obtained grid information.

131.   The grid administration system as recited in claim 130, wherein each of the one or more grids comprises a master node and one or more compute nodes.

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132.   The grid administration system as recited in claim 130, wherein the one or more grids are configured according to Sun Cluster Grid architecture.

133.   The grid administration system as recited in claim 130, wherein the peer-to-peer

15   platform protocols are JXTA protocols.

134.   A grid computing system, comprising:

20   means for a grid administration node to obtain grid information from one or more grids; and

means for the grid administration node to remotely manage operations of the one or more grids using the obtained grid information.

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135.   A method, comprising:

a grid administration node obtaining grid information from one or more grids in

30   accordance with one or more peer-to-peer platform protocols; and

the grid administration node remotely managing operations of the one or more grids via the one or more peer-to-peer platform protocols using the obtained grid information.

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136. The method as recited in claim 135, wherein each of the one or more grids comprises a master node and one or more compute nodes.

137. The method as recited in claim 135, further comprising:

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one of the master nodes receiving a job from a job submitter node in accordance with the one or more peer-to-peer platform protocols;

the master node distributing the job to the one or more compute nodes of the grid
15   for execution in accordance with the one or more peer-to-peer platform protocols;

the master node receiving results of the execution from the one or more compute nodes in accordance with the one or more peer-to-peer platform protocols;
20   and

the master node sending the results to the job submitter node in accordance with the one or more peer-to-peer platform protocols.

25 138. The method as recited in claim 135, wherein the one or more grids are configured according to Sun Cluster Grid architecture.

139. The method as recited in claim 135, wherein the peer-to-peer platform protocols are JXTA protocols.

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140.   A computer-accessible medium comprising program instructions, wherein the program instructions are configured to implement:

5   a grid administration node obtaining grid information from one or more grids in accordance with one or more peer-to-peer platform protocols; and

               the grid administration node remotely managing operations of the one or more grids via the one or more peer-to-peer platform protocols using the
10   obtained grid information.

141.   The computer-accessible medium as recited in claim 140, wherein each of the one or more grids comprises a master node and one or more compute nodes.

15   142.   The computer-accessible medium as recited in claim 140, wherein the one or more grids are configured according to Sun Cluster Grid architecture.

143.   The computer-accessible medium as recited in claim 140, wherein the peer-to-peer platform protocols are JXTA protocols.

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